WHAT IS CLAIMED:

1. Method for the production of a three-dimensionally shaped structural part comprising a basic sheet and at least one smaller locally arranged reinforcing sheet, in which the basic sheet is connected, in a flat state or in an incompletely formed preforming state, to the reinforcing sheet at a point predetermined for a subsequent reinforcing point, and the parts of the patched composite sheet structure are subsequently jointly formed by an openable and closeable forming tool in a forming press, wherein the patched composite sheet structure is heated before joint forming to a temperature which is above a forming temperature of the material, is formed in a hot state into a desired shape and is subsequently cooled in the forming tool, which is kept closed, or in a following fixing tool, with the desired forming state being fixed mechanically.

2. Method according to Claim 1, wherein parts of the patched composite sheet structure are heated to above a structural transformation temperature of the material above which the material structure is in an austenitic state.

3. Method according to Claim 1, wherein the patched composite sheet structure is heated before joint forming to a

specific temperature within a temperature range between 850°C and 930°C.

4. Method according to Claim 1, wherein the at least one reinforcing sheet or at least one of the reinforcing sheets is itself preformed, before being combined with the basic sheet, by affixation of reinforcing beads, in such a way that said reinforcing sheet nevertheless can come to bear in a dimensionally accurate manner at the predetermined point on the basic sheet and can be fixed to the latter.

5. Method according to Claim 1, wherein extraction of the heated composite sheet structure from a heating furnace, and introduction of the composite sheet structure in a defined position into the open forming tool up to the commencement of closing of the forming tool take place in a timespan of less than three seconds, preferably less than two seconds.

6. Method according to Claim 1, wherein counting from commencement of the closing of the forming tool to complete forming, the joint forming of the heated composite sheet structure introduced in a defined position into the open forming tool takes place in 3 to 5 seconds.

7. Method according to Claim 1, wherein cooling of the jointly formed composite sheet structure takes place, at least

in a first cooling phase on the forming tool, by contacting with the forming tool positively cooled from inside.

8. Method according to Claim 7, wherein the patched composite sheet structure remains in the forming tool which is kept closed after the joint forming and is cooled at least to about 500°C.

9. Method according to Claim 1, wherein the patched composite sheet structure remains in the forming tool which is kept closed after the joint forming and is first cooled to about 500°C and is subsequently transferred into an adjacent openable and closeable fixing tool which, in the closed state, comes into contact with the formed composite sheet structure received therein on both sides over the surface by a dimensionally accurate impression and continues to fix the desired forming state of the composite sheet structure mechanically, and

wherein, in the hot state which then prevails the formed composite sheet structure is trimmed by a trimming tool integrated in the fixing tool and continues to be cooled by the positively cooled impression of the fixing tool.

10. Method according to Claim 1, wherein after the joint forming, the positive cooling of the patched composite sheet structure is carried out first in the forming tool and

subsequently -- with the exception of brief transfer-induced interruptions --, with the desired forming state of the composite sheet structure constantly being fixed mechanically, by a sequence of adjacent openable and closeable fixing tools which, in a closed state, come into contact on both sides over the surface, with the composite sheet structure received in each case therein by a dimensionally accurate impression, the composite sheet structure being passed on from fixing tool to fixing tool and being cooled to at least 150°C in a plurality of successive stages by impressions of the fixing tools, said impressions being positively cooled from inside.

11. Method according to Claim 1, wherein the patched composite sheet structure is cooled after the joint forming either by the forming tool alone or jointly with a subsequent sequence of fixing tools for 20-40 seconds, preferably about 25-30 seconds.

12. Method according to Claim 10, wherein the patched composite sheet structure is cooled after the joint forming either by the forming tool alone or jointly with a subsequent sequence of fixing tools for 20-40 seconds, preferably about 25-30 seconds.

13. Method according to Claim 1, wherein to achieve a martensitic material structure in the formed composite sheet

structure, the latter is cooled at least in the temperature range between 800°C and 500°C, rapidly, that is to say from 800°C to 500°C in less than four seconds.

14. Method according to Claim 1, wherein the formed composite sheet structure is cooled to achieve a bainitic material structure, at least in the temperature range between 800°C and 500°C, comparatively slowly from 800°C to 500°C in a timespan lasting longer than four seconds.

15. Method according to Claim 1, wherein, the reinforcing sheet is affixed to the basic sheet, at least one of the sheets is provided on its contact surface with a hard solder in a surface-covering manner, the latter being melted during heating to forming temperature and the jointly formed composite sheet structure being cooled at least up to the complete solidification of the hard solder, with the forming state being fixed mechanically in the forming tool which is kept closed.

16. Method according to Claim 15, wherein the contact surface of the at least one sheet provided with hard solder is provided with an excess of hard solder and this excess is expressed at an edge of the reinforcing sheet during the joint forming.

17. Method according to Claim 15, wherein the contact surfaces both of the basic sheet and of the reinforcing sheet are cleaned and/or activated for hard soldering before the application of hard solder.

18. Method according to Claim 15, wherein the hard solder is applied in paste form.

19. Method according to Claim 15, wherein the hard solder is applied in the form of chips.

20. Method according to Claim 15, wherein the hard solder is applied in the form of a soldering foil blank punched out according to shape.

21. Method according to Claim 15, wherein a hard solder, the solidification temperature of which is at least 500°C, preferably at least 550°C, is used.

22. Method according to Claim 15, wherein, after the application of the hard solder and after the reinforcing sheet has been laid in a defined position onto the basic sheet, the two are provisionally fixed to one another by a single tacking point.

23. Method according to Claim 1, wherein the heating of the patched composite sheet structure takes place in a furnace in a protective-gas atmosphere.

24. Method according to Claim 15, wherein the heating of the patched composite sheet structure takes place in a furnace in a protective-gas atmosphere.

25. Method according to Claim 1, wherein the basic sheet and/or the reinforcing sheet consists of a water-hardening heat-treatable steel having the alloying composition listed below, where the contents are to be understood in % by weight and are to be added in addition to iron as the basic metal:

Carbon:	0.23 - 0.27%,
Silicon:	0.15 - 0.50%,
Manganese:	1.10 - 1.40%,
Chromium:	0.10 - 0.35%,
Molybdenum:	0 - 0.35%,
Titanium:	0.03 – 0.05%,
Aluminum:	0.02 – 0.06%,
Phosphorus:	max. 0.025%,
Sulphur:	max. 0.01%, and
Others in total:	0.0020 – 0.0035%.

26. Method according to Claim 15, wherein the basic sheet and/or the reinforcing sheet consists of a water-

hardening heat-treatable steel having the alloying composition listed below, where the contents are to be understood in % by weight and are to be added in addition to iron as the basic metal:

Carbon:	0.23 -	0.27%,
Silicon:	0.15 -	0.50%,
Manganese:	1.10 -	1.40%,
Chromium:	0.10 -	0.35%,
Molybdenum:	0 -	0.35%,
Titanium:	0.03 -	0.05%,
Aluminum:	0.02 -	0.06%,
Phosphorus:	max.	0.025%,
Sulphur:	max.	0.01%, and

Others in total: 0.0020 - 0.0035%.

27. Method according to Claim 1, wherein at least one of the basic sheet and the reinforcing sheet is precoated inorganically against corrosion and consists of a steel having the alloying composition listed below, where the contents are to be understood in % by weight and are to be added in addition to iron as the basic metal:

Carbon:	0.20 -	0.25%,
Silicon:	0.15 -	0.35%,
Manganese:	1.10 -	1.35%,
Chromium:	0.10 -	0.35%,
Titanium:	0.02 -	0.05%,

Sulphur: max. 0.008%, and

Others in total: 0.002 - 0.004%.

28. Method according to Claim 1, wherein the material strength of the composite sheet structure is increased to about 1300 - 1600 MPa by the heat treatment integrated into the process of joint hot forming.

29. Method according to Claim 15, wherein the material strength of the composite sheet structure is increased to about 1300 - 1600 MPa by the heat treatment integrated into the process of joint hot forming.

30. Method according to Claim 1, wherein locally reinforced shell parts for hollow members integrated into the passenger cell of a vehicle body are produced by means of this method.

31. Method according to Claim 15, wherein locally reinforced shell parts for hollow members integrated into the passenger cell of a vehicle body are produced by means of this method.

32. Method according to Claim 1, wherein locally reinforced shell parts for hollow members integrated into the chassis of a vehicle are produced by means of this method.

33. Method according to Claim 15, wherein locally reinforced shell parts for hollow members integrated into the chassis of a vehicle are produced by means of this method.

34. Method of making a shaped structural part from a basic sheet metal part and at least one reinforcing sheet metal part which is smaller than the basic sheet metal part, said method comprising:

heating the basic and reinforcing sheet metal parts together to a heated condition at a temperature higher than a predetermined forming temperature for material forming the sheet metal parts,

jointly mechanically forming the sheet metal parts in the heated condition to form a desired composite structural shape for the shaped structural part in a closed forming tool, and

subsequently cooling the shaped structural part while mechanically held in at least one of said forming tool and a following fixing tool.

35. Method according to claim 34, wherein said heating includes heating said sheet metal parts to a temperature above a structural transformation temperature where the material of said sheet metal parts is an austenitic state.

36. Method according to claim 34, wherein said heating

includes heating said sheet metal parts to said heating condition at a temperature between 850°C and 930°C.

37. Method according to claim 35, wherein said heating includes heating said sheet metal parts to said heating condition at a temperature between 850°C and 930°C.

38. Method according to claim 34, wherein said sheet metal parts are steel alloy parts having a composition of iron and the following materials in % by weight added to the iron:

Carbon:	0.23 - 0.27%,
Silicon:	0.15 - 0.50%,
Manganese:	1.10 - 1.40%,
Chromium:	0.10 - 0.35%,
Molybdenum:	0 - 0.35%,
Titanium:	0.03 - 0.05%,
Aluminum:	0.02 - 0.06%,
Phosphorus:	max. 0.025%,
Sulphur:	max. 0.01%, and
Others in total:	0.0020 - 0.0035%.

39. Method according to claim 34, wherein said sheet metal parts are steel alloy parts having a composition of iron and the following materials in % by weight added to the iron:

Carbon:	0.20 - 0.25%,
Silicon:	0.15 - 0.35%,

Manganese:	1.10 - 1.35%,	
Chromium:	0.10 - 0.35%,	
Titanium:	0.02 - 0.05%,	
Sulphur:	max.	0.008%, and
Others in total:		0.002 - 0.004%.

40. Method according to claim 34, wherein, the reinforcing sheet is affixed to the basic sheet, at least one of the sheets is provided on its contact surface with a hard solder in a surface-covering manner, the latter being melted during heating to forming temperature and the jointly formed composite sheet structure being cooled at least up to the complete solidification of the hard solder, with the forming state being fixed mechanically in the forming tool which is kept closed.

41. Method according to Claim 34, wherein locally reinforced shell parts for hollow members integrated into the chassis of a vehicle are produced by means of this method.

42. Method according to Claim 34, wherein locally reinforced shell parts for hollow members integrated into the chassis of a vehicle are produced by means of this method.

43. Method according to claim 34, wherein said jointly mechanically forming is performed within a few seconds of the heating.

44. Method according to claim 43, wherein said heating is performed in a furnace, and

wherein said jointly mechanically forming is initiated in a forming tool within a few seconds after removing the heated sheet metal parts from the furnace.

45. A motor vehicle body part made by the method of claim 34.

46. Apparatus for making a shaped structural part from a basic sheet metal part and at least one reinforcing sheet metal part which is smaller than the basic sheet metal part, said apparatus comprising:

means for heating the basic and reinforcing sheet metal parts together to a heated condition at a temperature higher than a predetermined forming temperature for material forming the sheet metal parts,

means for jointly mechanically forming the sheet metal parts in the heated condition to form a desired composite structural shape for the shaped structural part in a closed forming tool, and

means for subsequently cooling the shaped structural part while mechanically held in at least one of said forming tool and a following fixing tool.

47. Apparatus according to claim 46, wherein said means for heating includes means for heating said sheet metal parts to a temperature above a structural transformation temperature where the material of said sheet metal parts is an austenitic state.

48. Apparatus according to claim 44,

wherein said means for jointly mechanically forming the sheet metal parts includes a press with a pair of press members clampingly engageable with said sheet metal parts while forming same, and

wherein said means for subsequently cooling the shaped structural part includes cooling channels in at least one of said press members.